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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,439

06/23/2006

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EXAMINER

JANCA, ANDREW JOSEPH

ART UNIT

PAPER NUMBER

1797

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,439	Applicant(s) OKABE, YOSHIFUMI	
	Examiner Andrew Janca	Art Unit 4112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/29/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. This is the initial Office action based on the 10/580,439 application filed January 4, 2005.
2. The preliminary amendment filed May 24, 2006 has been entered.
3. Claims 1-8 are pending and have been fully considered.
4. Line numbers in US patents will be referred to by "xx:yy", where "xx" is the column number and "yy" are the line numbers. Paragraphs in published US applications will be referred to by "Pzz", where "zz" is the paragraph number.

Priority

5. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2,547,151 to BRAESEKE.

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8. With regard to claims 1 and 2, BRAESEKE discloses a plasticizing apparatus for resin material including

- a. a plasticizing barrel 44 (figure 1, 3:56-57);
- b. a heat source 56 outside the barrel, the source of the heating fluid entering jacket 71 (6:4-6);
- c. a heat transfer piece shaped like a ridge formed on an inner surface of the barrel [applicant's claim 1] formed in a spiral along an axial line of the barrel [claim 2], thread 40' of female screw element 40 (figure 1, 3:35-38);
- d. which transfers heat from the heat source outside the barrel, communicated via the walls of bore 41, to the resin inside.
- e. The threads' transference of heat is a statement of intended use, describing a function of this apparatus structure which the threads of BRAESEKE's apparatus are clearly capable of performing, since they and the barrel they are grooved on are structurally identical to the barrel and heat transferring ridges of the instant application. The Courts have held that if the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967); and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963) (see MPEP § 2114).

9. With regard to dependent claim 3, BRAESEKE discloses a heat receiving piece, jacket 71 (6:4-6) in bore 41 (3:51-52), which with its ducts communicating with heater 56 (4:2-4, 7:18-22) is formed in a molded and hence protrusion condition on the outer surface of the barrel; which part of the heating apparatus, the heat communication

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means between 71 and 56 is necessarily fit in contact with the outer surface of the barrel and the side surfaces of the heat receiving piece (else the heater 56-communication means 71 mechanism could not function).

10. Claims 1, 3, 4, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2003/0082266 by BABIN et al..

11. With regard to claim 1, BABIN et al. disclose (figure 1) a plasticizing barrel 12 (P66) connected to a heat source 26 outside the barrel (P68), and having disposed on its interior ridge-shaped heat transfer pieces integral to inner lining 234, in their embodiment displayed in cross-section of figure 23 (P97). The heat transfer pieces depicted therein are also structurally and hence functionally identical to the heat transfer ridges of applicant's embodiment depicted in his figure 1A.

12. With regard to claims 3 and 4, BABIN et al. disclose a heat receiving piece, spiral electric heating wire 236 (P81, P87) communicating heat from the external heater 236 to the nozzle barrel 234 (figure 9). The heat receiving piece and barrel are removably connected to the outer heater assembly by screw threads 48 and pitch 30 (figure 3, P25, Abstract).

13. With regard to claim 6, BABIN et al. disclose a cylindrical insulator, cylindrical air space 1068, covering the outer surface of the barrel (P100, figure 24) and which with the heater fit integrally into the outer sleeve is fit mountably and demountably upon the barrel (figure 3, P25, Abstract).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Dependent claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0082266 A1 to BABIN et al. in view of US 4,004,871 to HARDY.

a. BABIN et al. disclose a plasticizing apparatus for resin material having interior heat transferring ridges, formed of a heat receiving piece and assembly removably attached to a heater and assembly by spiral threads, forming a screw fastening. BABIN et al. do not appear to explicitly disclose a sliding mechanism of joining, except as a feature of cited prior art (P13).

b. However HARDY, the prior art cited by BABIN et al., discloses a two piece assembly of body insert 106 and recess, where the body insert including the barrel and heat transfer apparatus 132 are slidably inserted into the recess 108 of mold portion 13 (3:47-49) , which includes the source of potential 138 that causes the apparatus to be heated (3:50-4:8, figure 2).

c. BABIN et al. and HARDY are analogous art because they are from the same field of endeavor, namely that of plasticizing apparatuses.

d. At the time the invention was made, it would have been obvious to one of ordinary skill in the plastic arts to modify the insertable assembly of BABIN et al. so that the screwlike actuating ridges were instead disposed in a linear fashion,

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so as to insert and remove the insertable assembly in a slideable rather than screwable fashion. The motivation would have been to join the two pieces along a surface axially extending along the length of the inserted body assembly (HARDY 3:47). Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

16. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2,547,151 to BRAESEKE in view of US 2003/0082266 A1 to BABIN et al.

a. BRAESEKE discloses a plasticizing barrel, with a side port 97 for feeding the resin through a lateral wall of the barrel (figure 9), but does not appear to explicitly disclose a radiating member on the outer surface of the barrel.

b. However, BABIN et al. disclose a radiating member, metal nut 1002, which by protruding into the insulating air space 1068 necessarily radiates heat from the barrel body into the air space (P100, figures 24-25).

c. BRAESEKE and BABIN et al. are analogous art because they are from the same field of endeavor, namely that of plasticizing apparatuses.

d. At the time the invention was made, it would have been obvious to one of ordinary skill in the plastic arts to add the radiating nut of BABIN et al. to the side-loading barrel of BRAESEKE. The motivation would have been to allow adjustments to the nozzle and seal of the integral nozzle to which the nut was attached (BABIN et al. P100). Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 2,721,729 to VAN RIPER, US 2,895,167 to PAGGI, US 3,645,659 to SCHOTT Jr, and US 3,727,678 to SCHOTT Jr.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Janca whose telephone number is (571) 270-5550. The examiner can normally be reached on M-Th 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Barbara Gilliam can be reached on (571) 272-1330. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJJ

/Barbara L. Gilliam/
Supervisory Patent Examiner, Art Unit 4128